UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,949	10/20/2000	Olivier K. Swedor	61473/0270144	6427

7590   09/30/2003

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EXAMINER
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ART UNIT	PAPER NUMBER
2153	2

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/692,949	SWEDOR ET AL.
	Examiner	**Art Unit**	
	Bradley Edelman	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *20 October 2000* .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-50* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-50* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *20 October 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

This is a first office action on the merits of this application. Claims 1-50 are

presented for examination.

Specification

1.   The disclosure is objected to because of the following informalities: The "Cross —

reference to related applications" section on page 1 of the specification is not up to date.

Applicant should submit an amendment that specifies the current status of the two

mentioned co-pending applications.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-4, 9-20, 25-37, 39, 41, 45, and 47-50 are rejected under 35

U.S.C. 102(e) as being anticipated by Humpleman et al. (U.S. Patent No. 6,546,419,

hereinafter "Humpleman").

In considering claims 1 and 17, Humpleman discloses a network device and a method for causing a network device ("device B") to locally perform a service, comprising:

Means for receiving at the network device a document written in accordance with a markup language ("interface document INTERFACE.XML") and a corresponding document definition ("document type definition INTERFACE.DTD") (col. 15, lines 44-52; col. 18, lines 8-11, "the XMLRPC command messages are sent to the controlled device B over the network. Upon receiving said XMLRPC command messages...");

Means for parsing by the network device the received document in accordance with the corresponding document definition (col. 18, lines 11-13, "the controlled application 84 of device B uses the XML parser 74 of device B to parse and interpret the received XML command messages");

Means for executing the service on the network device in accordance with the parsed document (col. 18, lines 14-17, "device B then decodes the parser results... to perform requested services").

In considering claims 2 and 18, Humpleman further discloses the means for executing including means for interfacing with hardware and software on the network device (col. 15, lines 11-15, "in each device 14, applications at the top of the communication stack send and receive communication messages over the network, and communicate with software layers in the device stack that locally control the device hardware or service software for the device").

In considering claims 3 and 19, Humpleman further discloses that the markup language is XML ("XML").

In considering claims 4 and 20, Humpleman further discloses that the corresponding document definition is an XML DTD ("DTD").

In considering claims 9 and 25, Humpleman further discloses that the means for parsing include means for parsing from the document an identifier ("method name") corresponding to the service (col. 18, lines 13-17).

In considering claims 10 and 26, Humpleman further discloses that the means for parsing include means for parsing from the document runtime parameters corresponding to the service (col. 12, lines 63-65, "the look-up 56 table provides run-time translation of XML object method calls from Service B into device native language calls for Service A").

In considering claims 11 and 27, Humpleman further discloses means for instantiating an object corresponding to the service in accordance with the parsed identifier (col. 18, lines 19-21, "launch the native function implementations of device B").

In considering claims 12 and 28, Humpleman further discloses means for instantiating an object corresponding to the service in accordance with the parsed identifier and the parsed runtime parameters (col. 18, lines 19-21, "launch the native function implementations of device B," col. 12, lines 60-65, "run-time translation of XML object method calls").

In considering claims 13 and 29, Humpleman further discloses that the network can be one of a multitude of devices, including a router (col. 1, lines 36-38, 42-45).

In considering claims 14 and 30, Humpleman further discloses that the network device comprises a packet forwarding architecture (i.e. a router).

In considering claims 15 and 31, Humpleman further discloses means for preparing a response corresponding to the executed service (col. 18, lines 21-24, "responses").

In considering claim 16 and 32, Humpleman further discloses means for forwarding the response to a remote requestor of the service (col. 18, lines 23-24, "responses [are] sent to the controller device A").

In considering claim 33, Humpleman discloses a network device ("device B") for

locally performing a service in accordance with a received document written in a

document markup language ("interface document INTERFACE.XML"), comprising:

Means for receiving at the network device a document written in accordance with

a markup language ("interface document INTERFACE.XML") and a corresponding

document definition ("document type definition INTERFACE.DTD") (col. 15, lines 44-52;

col. 18, lines 8-11, "the XMLRPC command messages are sent to the controlled device

B over the network. Upon receiving said XMLRPC command messages...");

A parser that is adapted to parse the received document in accordance with the

corresponding document definition to obtain an identifier of the service (col. 18, lines 11-

16, "the controlled application 84 of device B uses the XML parser 74 of device B to

parse and interpret the received XML command messages," wherein the identifier is the

"method name"); and

A service launcher that is adapted to launch the service corresponding to the

identifier parsed from the received document (col. 18, lines 17-21, "device B then uses

the XML... to access and launch the native function implementation of device B...").

In considering claim 34, Humpleman further discloses a network data transfer

service that is adapted to communicate with remote devices for receiving the document

(col. 16, lines 13-16, "a Home Network Device Web server 86 in each of the devices A

and B manages communication between the devices over the network").

In considering claim 35, Humpleman further discloses that the network data transfer service comprises an HTTP server ("Web server 86").

In considering claim 36, Humpleman further discloses that the markup language is XML ("XML").

In considering claim 37, Humpleman further discloses that the corresponding document definition is an XML DTD ("DTD").

In considering claim 39, Humpleman further discloses a services storage coupled to the service launcher that stores a plurality of services, the service launcher being further adapted to select the service from the stored plurality of services in accordance with the parsed identifier (col. 18, lines 9-21, wherein the parsing obtains method call information and a method name, which are used to select from the plurality of services – i.e. handlers – to perform the service).

In considering claim 41, Humpleman further discloses that the device further comprises a packet forwarding switch fabric (col. 1, lines 36-37, "router").

In considering claim 45, Humpleman further discloses device APIs for interoperating with the device hardware and software for executing launched services (col. 14, lines 20-25, "API interface").

In considering claim 47, Humpleman further discloses device APIs for

interoperating with the device hardware and software for executing launched services

(col. 14, lines 20-25, "API interface").

In considering claim 48, Humpleman discloses a method for causing a network

device to locally perform a service, comprising the steps of:

Identifying the service to be performed at a remote client computer, and

preparing at the remote client computer a document written in a markup language in

accordance with a document definition, the document including an identifier of the

service (col. 18, lines 3-10, wherein "device A" generates the XML document to send a

command message to device B, the document inherently including an identifier of the

service – see Example 1, line 45, wherein "DVCR1.record" identifies the service);

Transmitting the document to the network device (col. 18, lines 8-9);

Identifying at the network device the document definition corresponding to the

transmitted document (col. 18, lines 10-16; col. 15, lines 44-52, wherein the DTD file

corresponding to the document is also received and identified at the network device);

Parsing by the network device the transmitted document in accordance with the

corresponding document definition (col. 18, lines 10-16, "parse and interpret the

received XML command messages"); and

Executing the service on the network device in accordance with the parsed

document (col. 18, lines 12-17, "perform requested services").

In considering claim 49, Humpleman further discloses that the markup language

is XML ("XML").

In considering claim 50, Humpleman further discloses that the corresponding

document definition is an XML DTD ("DTD").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 5-8, 21-24, and 38 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Humpleman, in view of Gessner (U.S. Patent Publication No.

2002/0032709, filed on Sep. 29, 1998).

In considering claims 5, 7, 21, and 23, these claims all recite retrieving the

corresponding document definition from a plurality of document definitions in

accordance with an identifier in the received document. This feature is not taught by

Humpleman. Humpleman teaches a document definition corresponding to a document,

but remains silent regarding how the document definition is selected or retrieved.

Nonetheless, selection at run time of document definitions that correspond to a selected

markup language document is well known, as evidenced by Gessner. Gessner

discloses a system that uses DTDs and their corresponding documents, wherein the

DTDs "may be locally stored [or] may be stored remotely on server systems and

delivered at and during run time of a browser, etc. to facilitate dynamic replacement of

particular grammars and to further facilitate the rendering of content based thereon."

See ¶ [0041]. Thus, a person having ordinary skill in the art would have readily

recognized the desirability and advantages of selecting the corresponding DTDs in the

system taught by Humpleman according to the id contained in the documents, to

facilitate dynamic creation of the XML file, thereby further enhancing the dynamic nature

of the control and command system taught by Humpleman (see Humpleman, col. 2,

lines 39-41). Therefore, it would have been obvious to use the dynamic DTD selection

taught by Gessner in the dynamic control and command system taught by Humpleman.

In considering claims 6, 8, 22, and 24, Gessner further discloses that the

document definitions are provided locally ([0041], "DTD components may be locally

stored").

In considering claim 38, claim 38 contains the same limitations as claims 5, 7, 21,

and 23, but adds the feature that the device further comprises a document definition

storage that stores the plurality of definitions from which selection is made. This

storage feature is further taught by Gessner in ¶ [0041], which recites "DTD components

may be locally stored."

4.   Claims 40 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Humpleman, in view of Applicant's admission of the prior art, or alternatively in

view of Jaeger et al. (Dynamic Classification in Silicon-based Forwarding Engine

Environments, December 1999, hereinafter "Jaeger").

In considering claim 40, Humpleman teaches that the service launcher is

adapted to launch the service using a runtime environment (col. 18, lines 10-21

describe that the service launcher generates native function implementations from the

XML document, and col. 12, lines 55-65 describe that such translation occurs at run-

time). However, Humpleman does not disclose the use of the "Oplet Runtime

Environment." Nonetheless, the Oplet Runtime Environment is a well known

environment in the router environment, as evidenced by both applicant's admission of

prior art (see specification, p. 9, lines 8-16), and by Jaeger (Abstract). A person having

ordinary skill in the art would have readily recognized the desirability and advantages of

using the ORE to manage the routers in the system taught by Humpleman, because

ORE "supports the creation of services in Java that are extensible, portable, and easily

distributed over the network," (see Jaeger, Conclusion, p. 109). Thus, it would have

been obvious to use the Oplet Runtime Environment as the runtime environment in the

system taught by Humpleman.

In considering claim 46, Humpleman further discloses device APIs for

interoperating with the device hardware and software for executing launched services

(col. 14, lines 20-25, "API interface").

5.   Claims 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Humpleman, in view of Raz et al. (U.S. Patent No. 6,529,515, hereinafter "Raz").

In considering claim 42, although the system taught by Humpleman discloses

that the device can be a packet forwarding switch fabric (i.e. router), Humpleman does

not disclose the specific features on a router that can be monitored and managed, and

thus does not disclose that the launched service causes changes in how packets are

forwarded through the switch fabric, as claimed. Nonetheless, controlling routers in a

network monitoring system in the manner claimed is well known, as evidenced by Raz.

In a similar art, Raz discloses a network management system that allows a managing

device to manage a router (Abstract), wherein the management functions include

controlling the forwarding operation of routers (col. 7, lines 19-20). Thus, given the

teaching of Raz, a person having ordinary skill in the art would have readily recognized

the desirability and advantages of allowing the managers or controllers in the system

taught by Humpleman to change the forwarding operation of the routers in the manner

taught by Raz, to best optimize network traffic flow by allowing a managing station to

select the most efficient path for communications. Therefore, it would have been

obvious to allow the managers in the system taught by Humpleman to change the

forwarding operation of the routers.

In considering claim 43, Raz further discloses that the management system can

also monitor performance of packet forwarding in the routers (col. 5, lines 30-33). It

would have been obvious to a person having ordinary skill in the art to include this feature in the system taught by Humpleman, to inform the manager of the current network traffic so that the manager could best select forwarding operation for the routers.

In considering claim 44, Raz further discloses that a system monitoring routers in a network accesses an MIB on the routers (col. 5, lines 35-38, "standard SNMP agents exist in most conventional routers and provide a read/write interface to a standard MIB"). Because this is a standard practice in network management, it would have been obvious to a person having ordinary skill in the art to include it in the router monitoring system taught by Humpleman.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is (703) 306-3041. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

For all After Final papers: (703) 746-7238.

For all other correspondences: (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3900.

BE

September 16, 2003

GLENTON B. BURGESS
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